



MINING EQUIPMENT AUSTRALIA

(Based on exchange rate US \$1 = AUD \$ 1.28)

PREPARED BY:

Contact: John McCaffrey, Commercial Specialist
Organization: U.S. Commercial Service, Melbourne
Telephone: 61-3-9526-5924
Fax: 61-3-9510-4660
Email: john.mccaffrey@mail.doc.gov

SUMMARY:

Australia continues to rank as one of the leading nations with substantial identified resources of major minerals and fuel close to the surface. In many commodities Australia is already a top producer or has one of the largest potential resources available for mining. With a long history in mining, the local industry has become one of the most technologically advanced and many of the world's top producers of mining equipment have established a presence in Australia.

The Australia mining industry imports an estimated 70 percent of its equipment. U.S. suppliers hold key positions in many areas of mining equipment supply, with Australia being the third largest market for these companies. U.S. products are often recognized for their quality, with companies often prepared to pay a premium for such equipment given the heavy losses associated with equipment failure or production delays.

At the present time a number of factors are driving up mine production and in the process increasing the demand for equipment and services. Most significant of these is the increased demand for coal and iron ore from a number of developed and developing economies. Mining operations and supply chains are most profitable when operating close to capacity, hence there was little spare capacity in place when the demands of recent years occurred.

The future for mining equipment suppliers to Australia looks bright, given the anticipated investment in both plant and equipment is not expected to diminish for a number of years. Experts predict increasing demand for Australia's mining commodities to continue into next year with of continued high prices and regional demand for commodities cited as two major reasons for growth (double digit growth expected for coal and iron ore).

MARKET OVERVIEW:

- Mining has always been a key sector in the Australian economy and responsible for much of the country's historical wealth. Currently mining accounts for around 5% of Australia's GDP and has annual exports of USD \$22 billion. Mining is the nation's second largest export earner after manufacturing and represents 26% of all exports.
- Historically mining operations began in Australia around the end of the 18th century with the discovery of coal deposits. The discovery of gold in the 1850s in Victoria spurred the Australian mining industry, and led to the discoveries of other commodities. The early mining rushes were also responsible for the significant investment in port, rail and town infrastructure across the country. Other commodities such as bauxite, diamond, nickel and uranium have had much shorter histories of production.

- Australia has the world's largest demonstrated resources of lead, mineral sands, silver, tantalum, uranium and zinc. It also ranks in the top six countries in the world for economic resources of bauxite, coal, copper, cobalt, diamonds, gold, iron ore, manganese ore and nickel.
- Despite the importance of mining, Australia remains under-explored over vast regions. For metals, this is the case at depths of greater than 400 feet in established mineral provinces, and under the covered margins of these provinces. Exploration expenses in 2003 were estimated at around USD \$570m
- Current estimates of mining activity in Australia suggests that there are more than 700 registered operating mines, employing over 67,000 people.
- Given the importance of this industry a number of Australian companies are world leaders in mining technology and services. Annual expenditure on R&D is about USD \$420m with significant government support of research efforts. Marketing and international development of Australian mining technology is undertaken by the Austmine group - www.austmine.com.au

Table 1 –Market for Mining Equipment In Australia (USD \$ millions)

	2002	2003	2004
Total Market Size	2,095	2,746	3,532
Total Local Production	1,250	1,414	1,867
Total Exports	475	481	560
Total Imports	1,320	1,812	2,225
Imports from the U.S.	475	652	801

Exchange rate - USD \$1 = AUD \$ 1.841 (in 2002), 1.542 (in 2003), 1.360 (in 2004)

INDUSTRY STATISTICS:

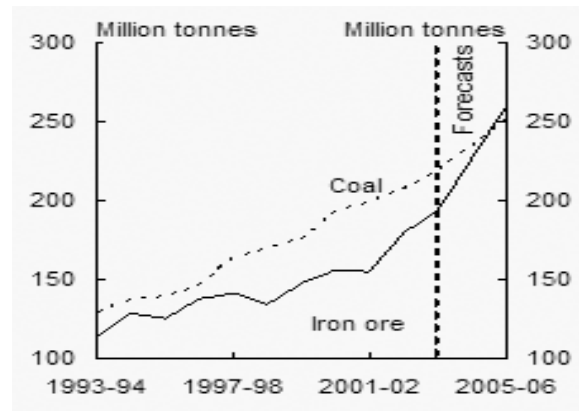
- Current estimates of mineral production are given below for a number of key commodities. Table 1 presents production estimates for both Australia and other large producers for each mineral.

Table 2 –Global Annual Production Estimates of Key Resources – 2002/03

	Bauxite (kt)	Black Coal (Mt)	Brown Coal (Mt)	Copper (kt)	Gold (t)	Iron Ore (kt)	Nickel (kt)	Uranium Oxide (t)
Australia	54,024	226	76	787	273	182,704	211	6,854
Brazil	13,900					210,000		
Canada							178	11,604
Chile				2,972				
China	12,000	1,326			190	231,000		
Greece			78					
Germany			200					
Guinea	15,700							
India		334				80,000		
Indonesia				1,160			122	
Jamaica	13,119							
Kazakhstan								2,800
New Caledonia							100	
Niger								3,075
Peru				687				
Russia			82	695	158	84,236	310	2,900
South Africa		223			399			
United States		917	82		298			

Sources – ABS, DOE, Geosciences Australia, USGS, www.indexmundi.com

- Much of the recent activity in Australia has focused on two of these key minerals - coal and iron ore, mainly due to the demand for these minerals from China, Korea and Japan.
- The graph to the right shows the annual increases in local production of coal and iron ore since 1993, as well as the forecast production for the 2005/06.



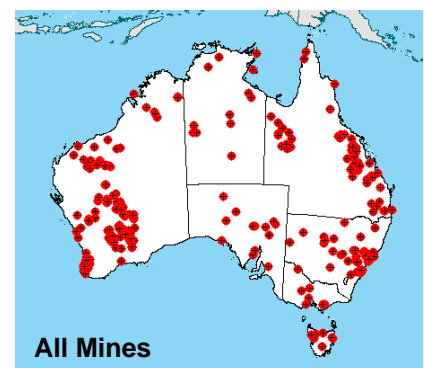
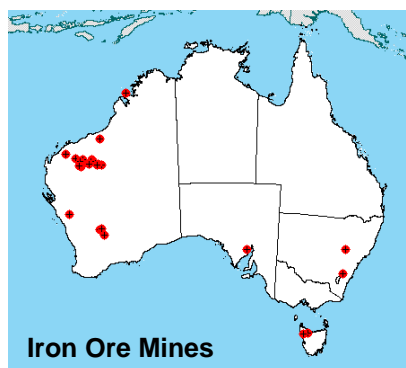
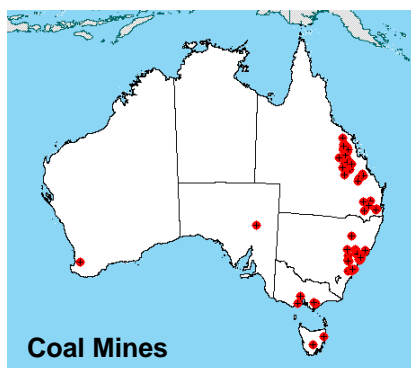
- Mining occurs across most of Australia with some regions being noted for particular mineral wealth. For example most of Australia's iron ore (97%) comes from the Hamersley Basin in Western Australia while black coal resources are concentrated (96%) in New South Wales and Queensland.

Table 3 –Annual Production Estimates by Australian State– 2003/04

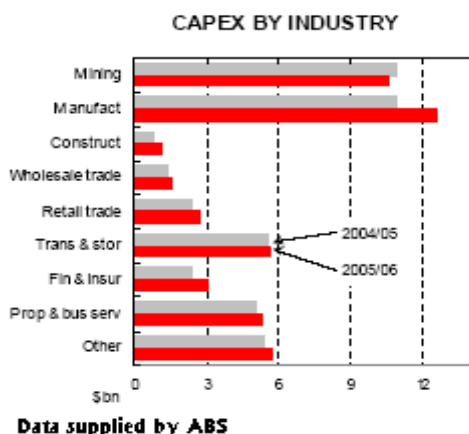
	Bauxite (kt)	Black Coal (Mt)	Brown Coal (Mt)	Copper (kt)	Gold (t)	Iron Ore (kt)	Nickel (kt)	Uranium Oxide (t)
New South Wales		148		163	28			
Northern Territory	5993				22			3959
Queensland	12070	204		391	39			
South Australia		3.4		172	5	2672		4129
Tasmania		0.6		30	11	2208		
Victoria			67		3			
Western Australia	38072	6		46	177	202087	154	
Total	56135	362	67	802	285	206967	154	8088

Sources – ABS, Geosciences Australia

- The figures below give a good indication of the spread of mining across Australia. It should be noted that Australia has roughly the same land area as the United States.



Sources – Australian Atlas of Mineral Resources and Mines



- Worldwide demand for minerals is expected to remain steady or increase over the next few years.
- Around A\$20 billion has been invested in new production and transportation capacity in the mining sector over the past two years alone.
- Ongoing capital expenditure in Australia is therefore estimated at around AUD\$10 billion for 2004/05 and 2005/06 as more projects are developed and existing mines are upgraded and/or expanded.

U.S. POSITION:

- U.S. manufacturers of mining equipment hold the dominant position in many of the key equipment inputs in Australia's mining operations, when compared with other exporters to Australia.
- After Canada and China, Australia was the third largest market for U.S. producers of mining equipment in 2003, with growth in exports to Australia increasing by 75% between 2002 and 2003. ITA Statistics

Table 4 – Mining Equipment Exports to Australia – 2004 (USD \$ millions)

Country	Coal Cutting Equip	Crushers, Sieves + parts	Dozers, Loaders, Shovels	Dozers etc - Parts	Drilling + Boring Equip	Drilling + Boring Parts & Bits	Dump + Heavy Trucks	Pneumatic Hand Tools	Mining Pumps + Parts	Tires
Austria	19.5									
Belgium			17.2					0.9	3.3	
Canada		6.3	16.8	7.7		2.9	10.8		1.9	
China		8.8		4.9		3.3		7.6		2.8
Finland				5.5	22.4					
France			46.3	21.2						6.1
Germany	4.6	24.2	43.6	22.5				1.6	0.3	
Indonesia		13.3								
Italy				11.8	4.4	1.9		1.4	0.6	
Japan	3.2		380.0	28.7	2.4		105.6	9.2		96.3
Malaysia		11.6								
South Africa		27.7				3.4			1.0	
Korea, South			47.9							
Spain		11.1								21.4
Sweden	0.3	7.3	25.1	5.8	19.5	19.1	24.4	1.5		
Taiwan								7.4		
United Kingdom		31.3	42.6	9.4		6.3	18.2	1.0	2.5	
United States	0.3	36.9	308.4	94.8	35.1	25.3	395.1	8.9	6.8	43.4
World	28.1	225.2	1029.3	245.2	91.0	68.4	598.1	43.0	17.8	175.0

Note - Source – Australian Customs

- For some of the above products, mining may not be the only industry represented in the above figures (i.e. dozers are also used in construction)

- As indicated in the table above, US market share has been as high as 50 percent in a number of areas, mainly around large capital equipment – particularly heavy truck and dozers, loaders, etc.

- Products from the U.S. are generally well regarded for their quality and reliability but are often regarded as being expensive when compared with other manufacturers. As local mining companies place high priority on reliability (due to the enormous costs of equipment failure), U.S. companies will continue to be a supplier of choice whilst they maintain quality position over other suppliers.
- Given the very large market offered by Australian mining many suppliers are improving their products to gain access to local miners. Having a very international outlook, Australia miners are always looking to source equipment from suppliers with the best product proposition.
- For more commodity goods, the U.S. share of Australia's total import market is often less and is coming under increasing pressure from Asian suppliers such as China, Indonesia, Japan, Malaysia, South Korea and Taiwan.

KEY INDUSTRY CONCERNS / DRIVERS:

- Capacity constraints in a number of areas of the mining industry is drawing a lot of news coverage at the present time. One of the principal areas of focus has been the coal loading facilities on Australia's east coast. There are a number of proposed developments to look at increasing the effectiveness of these loading facilities to meet increased export demands.
- Skilled mining staff are in very short supply including mining engineers and operations staff. The Australian government has begun a number of measures to look at correcting this talent shortfall. Products that can reduce the need for personnel or labor will continue to be well regarded given these shortages and the drive for more efficient production.
- The supply of many pieces of mining equipment has come under pressure as a result of increased mining activity worldwide. Delays on some capital pieces of plant are as long as 12 months or more.
- As a continent many areas of Australia remain under-explored, with significant additional resources potentially available for mining. Modification to taxation schemes and other regulations to increase the attractiveness of Australia to explorers (particularly junior explorers) is an important issue the industry is addressing with the Australian government. There is a trend towards increased exploration expected in the coming years.
- Health and safety of the local work force remains the key priority with all of Australia's mining companies. Stringent regulations, organised union (CFMEU) activity and modern company practices all help to maintain the paramount importance of mineworker safety. Products or services that enhance this aspect of mining are well regarded.
- Increased pressure for mining companies to be more environmentally responsible provides an opportunity for companies with technologies that can reduce or remove contaminating materials from operations. Improving use of limited water supplies has become an issue for a number of mines.
- Regulating bodies such as the Environmental Protection Agency place have quite strict guidelines for companies to abide by and public pressure on improving environmental performance drive companies. Many Australian mining companies now provide detailed reporting on their environmental activities in their annual reports.
- Common to all commodity industries is the increased drive to enhance profitability through efficiency improvements. Whilst Australia is blessed with substantial mineral wealth, pressures to decrease costs or increase production for same cost are still relevant.

BEST PROSPECTS:

- Coal loading equipment and associated infrastructure machinery
- Equipment for ore transport, particularly rail
- Safety equipment for underground mines
- Heavy duty truck & loader consumables – especially tires
- Mining software, especially PC/Windows based design product
- Products or services that resolve the personnel, safety and/or environment issues raised above

EQUIPMENT SOURCING & PURCHASING:

- Discussions with industry sources supplying Australia's miners suggest that the procurement patterns reflect two distinct pattern of behavior – dependent upon the value of the product being procured.
- Standard / consumable items for usual operation and maintenance are mainly sold through established suppliers that sell to mining and other heavy industries. Companies maintain lists of suppliers of commonly used equipment. Many of these suppliers stock products from a number of manufacturers and often act as agents for overseas manufacturers.
- In more specialized products such as drilling supplies and consumables there are specialist retailers / wholesalers rather than general suppliers.
- Where the mining company has large volume use of particular items there may be an opportunity to sell directly, however some form of local support and servicing will generally be required.
- Partnering with a local supplier that carries inventory to supply the mining industry is generally the most logical step for many U.S. manufacturers seeking sales in the Australian market.
- Capital equipment (i.e. dozer, excavators, trucks) is often marketed and sold directly to mining companies. A number of equipment manufacturers differentiate themselves through superior service with some establishing servicing operations and facilities at the sites of their larger customers.
- Companies that have new or innovative technology in the power sector might also consider directly approaching the end users of this equipment. Often such equipment falls outside the usual construction and maintenance cycle and may require special consideration (e.g. trial retrofitting).
- Larger projects, such as a complete crushing station or coal supply network are often subject to a tendering process. In many cases several companies joint venture to undertake these projects. There will be occasions where mining companies will engage the services of an engineering, procurement and construction (EPC) contractor to undertake this role. Supply to these contracts is competitive, assumes knowledge of local technical requirements and may require several levels of qualification.
- US companies that want to enter the Australian market should identify themselves to Australia's EPC contractors to ensure they receive timely information about tenders. Traditionally these EPC companies have maintained pre-qualified lists of equipment suppliers that meet local requirements.
- The following table presents a summary of projects that have been proposed for development. Many of these will be dependent upon the current market for minerals to continue as is or improve.

Table 5 – Proposed Mining and Mineral Projects in Australia

Mineral Project	Number of Projects	Expected Capital Expenditure (USD \$ millions)
Coal	24	3,300
Copper	12	2,800
Gold	18	850
Iron Ore	13	9,800
Nickel	10	3,200
Other mining	39	5,900

Equipment costs represent a significant portion of the capital expenditure total.

- At the present time there is around USD \$11.5 billion dollars of money committed to 47 existing projects. These covered a range of commodities with the following allocation of project funding – alumina (17%), coal (28%), gold (6%), iron ore (22%), nickel (11%) and other minerals (16%).

MARKET ACCESS:

- There are no quota limits on the import of mining equipment into Australia
- All tariffs on the equipment discussed in this report have been reduced to 0% for US exporters following the introduction of the U.S. / Australia FTA on 1 January 2005
- Australia has a goods and services tax of 10% on all equipment inclusive of landed costs.
- There are a number of local standards relating to mining equipment, many of which are related to Australia's stringent occupational health and safety requirements for its heavy industries. Companies should check their compliance requirements carefully.
- While the Australia standards are typically based on ISO standards a number have been modified for Australian conditions. Details of Australian standards can be found at the following website - www.standards.com.au
- Occupational health and safety is controlled by each Australian state, each of which may have slightly differing requirements. Websites for each of the state mining authorities is given below:
-

MARKET ENTRY:

The mining equipment market in Australia is a relatively mature market with a number of established local manufacturers. As indicated earlier the US is already a substantial supplier of this equipment and technology to Australia along with a number of other countries. Given this potential competition it is therefore suggested that U.S. businesses undertake some market research and evaluation before entering the Australian market to identify the more attractive areas of opportunity. Often it is the more innovative and technology driven products that often offer the best opportunities to US manufacturers.

Given the size of the Australian market and high skill base within the local industry, many US companies seeking to export to Australia initially chose to establish a local partner (i.e. distributor, sales & service agent). While many local firms supplying equipment to the mining industry already have significant portions of the Australian market, they are often looking for new products to extend their range.

The U.S. Commercial Service is able to assist US companies with specific market intelligence relevant to their needs and / or to conduct partner searches to locate an Australian distributor or agent.

OPPORTUNITIES FOR PROFILE BUILDING / UPCOMING TRADE EVENTS:

- **Mining & Energy Exhibition** – Muswellbrook, New South Wales, September 21-24, 2005.
The Mining & Energy Exhibition will be an international standard exhibition showcasing a large range of equipment and services for the mining, energy and engineering industries. Located in the center of New South Wales' coal mining area. www.me.reedexpo.com.au
- **Queensland Mining & Engineering Exhibition** – Mackay, Queensland, July 27-29, 2006.
QME was first launched in 1993 to service the mining, sugar, power generation and general engineering industries surrounding Mackay. At the last show in 2004, 80% of attendees were focused on mining equipment and technology - www.qme.reedexpo.com.au
- **Asia Pacific's International Mining Exhibition: AIMEX, Sydney, September 4-7, 2007.**
www.aimex.reedexhibitions.com.au

OTHER RESOURCES:

- Austmine – www.austmine.com.au
- Australian Coal Association - www.australiancoal.com.au
- Australian Institute of Geoscientists - www.aig.asn.au
- Australasian Institute of Mining and Metallurgy - www.ausimm.com.au
- Australian Drilling Industry Association – www.adia.com.au
- Mineral Council of Australia - www.minerals.org.au

CONTACT US:

If you would like to discuss opportunities in Australia for your particular mining equipment or service or need other information on the Australian resources sector, we stand ready to receive your queries. Please contact John McCaffrey, Commercial Specialist responsible for these sectors at: john.mccaffrey@mail.doc.gov.

You may also want to visit our website for updates on Australia - www.buyusa.gov/australia